

Model Question Paper-2 with effect from 2019-20 (CBCS Scheme)

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**Fourth Semester B.E. Degree Examination
Molecular Biology 18BT42**

TIME: 03 Hours

Max. Marks: 100

Note: 01. Answer any **FIVE** full questions, choosing at least **ONE** question from each **MODULE**.

Module -1			*Bloom's Taxonomy Level	Marks
Q.01	a	Describe Chromosomal theory of heredity.	L1	10
	b	Explain in detail Genetic code and its features.	L1 L2	10
OR				
Q.02	a	Describe Structures and forms of DNA.	L1 L2	10
	b	Discuss in detail mechanism of DNA replication and enzymes involved.	L1	10
Module-2				
Q. 03	a	Write a note on Structure and function of RNA polymerases.	L2	10
	b	Discuss in detail about mechanism of transcription in Prokaryotes.	L2 L3	10
OR				
Q.04	a	Write a note on post-transcriptional processing.	L2 L3	10
	b	Discuss about Ribozymes and transcription inhibitors.	L3	10
Module-3				
Q. 05	a	Outline the Mechanism of translation.	L1 L2	10
	b	Summarize the Post-translational modifications.	L1 L2	10
OR				
Q. 06	a	Write a note on protein splicing.	L2 L3	10
	b	Discuss the differences between prokaryotic and Eukaryotic protein synthesis.	L2 L3	10
Module-4				
Q. 07	a	Explain in detail the lac Operon model.	L3 L3	10
	b	Discuss positive versus negative gene regulation.	L2 L3	10
OR				
Q. 08	a	Explain in detail the gal Operon model.	L2 L3	10
	b	Distinguish between Regulation of gene expression in prokaryotes and eukaryotes.	L2 L3	10
Module-5				
Q. 09	a	Write a note Genetic recombination in bacteria.	L3 L4	10
	b	What are transposons and insertion sequences?	L3 L4	10
OR				
Q. 10	a	Write a note on DNA damage and Repair.	L3 L4	10
	b	Give an account on role of recombination and transposition in evolution.	L2 L3	10